Dominion Nuclear Connecticut, Inc. Millstone Power Station Rope Ferry Road Waterford, CT 06385



JL | 2003

Docket No. 50-423 B18922

RE: 10 CFR 50.12 10 CFR 50.44 10 CFR 50.46 10 CFR 50 Appendix K

U.S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, DC 20555

Millstone Power Station, Unit No. 3
Request for Exemption Pursuant to 10 CFR 50.12
Exemption to the Cladding Material Specified in 10 CFR 50.44, 10CFR 50.46, and 10 CFR 50 Appendix K

Pursuant to 10 CFR 50.12, Dominion Nuclear Connecticut, Inc. (DNC) requests an exemption from certain requirements of 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Nuclear Power Reactors," and Appendix K of 10 CFR 50, "ECCS Evaluation Models." The exemption requested relates solely to the specific types of cladding material specified in these regulations for use in light water reactors. As written, the regulations presume the use of Zircaloy or ZIRLO™ fuel rod cladding. In order to use Optimized ZIRLO™, a limited exemption to these regulations is needed.

DNC requests an exemption of these requirements to allow up to eight lead test assemblies (LTAs) containing fuel rods, guide thimble tubes, and instrumentation tubes fabricated with a "low tin" version of ZIRLO™ (Optimized ZIRLO™). The exemption request is required since the tin content in the ZIRLO™ material will be below the current licensing basis of ZIRLO™ as specified in WCAP-12610-P-A, "VANTAGE + Fuel Assembly Reference Core Report." The LTAs are planned to be initially inserted into the Millstone Power Station, Unit No. 3 Cycle 10 core in non-limiting core locations during its next refueling outage. This refueling outage is scheduled to begin in the spring of 2004.

APOI

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An optimization of ZIRLOTM corrosion resistance is being pursued to support the improved fuel performance and reliability at increasing burnup levels. Available industry data indicates that lower tin content should enhance the in-reactor corrosion resistance.

The licensing basis for ZIRLO™, as defined in WCAP-12610-P-A, specifies the tin composition as being between 0.80% and 1.20%. The proposed level of tin composition in the Millstone Unit 3 LTAs will be nominally below the lower bound licensed limit of 0.80%. Further details justifying the acceptability of the Optimized ("low tin") ZIRLO™ LTAs are provided in Attachment 1.

As demonstrated in Attachments 1 and 2 to this letter, the exemption requested is authorized by law, presents no undue risk to public health and safety, is consistent with common defense and security and is supported by special circumstances.

DNC requests that this exemption request be reviewed and approved by January 2004, in order to support fuel procurement and final fuel delivery for Millstone Unit 3 Cycle 10.

As Attachment 1 contains information proprietary to Westinghouse Electric Company, a BNFL group company ("Westinghouse"), it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.790 of the Commission's regulations.

Attachment 3 contains a Westinghouse authorization letter, CAW-03-1663 and accompanying affidavit, proprietary information notice, and copyright notice.

Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.790 of the Commission's regulations.

Correspondence with respect to the copyright or proprietary aspects of the items listed above or the supporting Westinghouse affidavit should reference CAW-03-1663 and should be addressed to Henry A. Sepp, Manager of Regulatory and Licensing Engineering, Westinghouse Electric Company LLC, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

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There are no regulatory commitments contained in this letter.

If you should have any questions on the above, please contact Mr. David Dodson at (860) 440-2346.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.

J. Alan Price

Site Vice President - Millstone

Attachments: (3)

cc: Non-Proprietary

H. J. Miller, Region I Administrator Millstone Senior Resident Inspector

Proprietary

V. Nerses, NRC Senior Project Manager, Millstone Unit No. 3

Westinghouse Non-Proprietary Class 3

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Docket No. 50-423 B18922

Attachment 2

Millstone Power Station, Unit No. 3

Request for Exemption From the Provisions of 10 CFR 50.44, 10 CFR 50.46, and 10 CFR 50 Appendix K For Eight Lead Test Assemblies (LTAs) NON-PROPRIETARY

Westinghouse Non-Proprietary Class 3

Millstone Power Station, Unit No. 3
Request for Exemption From the Provisions of
10 CFR 50.44, 10 CFR 50.46, and 10 CFR 50 Appendix K
For Eight Lead Test Assemblies (LTAs)

[Proprietary information is enclosed in brackets. Superscripts a, b, and c refer to Affidavit paragraphs 4(ii)(a), 4(ii)(b), 4(ii)(c)]

Purpose

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The purpose of this attachment is to provide supporting justification for an exemption request related to the use of "low tin" (Optimized) ZIRLO™ Lead Test Assemblies 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," and 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Nuclear Power Reactors," specifically refer to fuel with Zircaloy or ZIRLOTM cladding, and paragraph I.A.5 of 10 CFR 50 Appendix K, "ECCS Evaluation Models," references an analysis which utilizes the Baker-Just equation which assumed use of a zirconium alloy different than Therefore, 10 CFR 50.44, Optimized ("low tin") ZIRLO™ used in the LTAs. 10 CFR 50.46, and 10 CFR 50 Appendix K do not specifically apply to the proposed LTAs since the composition of tin in the LTAs will be nominally [below the lower bound licensed limit (i.e., 0.80%) of ZIRLO™ as specified in Appendix A of WCAP-12610-P-A, "VANTAGE + Fuel Assembly Reference Core Report," dated April 1995 (Reference 1). Westinghouse has submitted Addendum 1 to WCAP-12610-P-A/CENPD-404-P-A that addresses Optimized ZIRLO™ and demonstrates that Optimized ZIRLO™ has essentially the same properties as currently licensed ZIRLO™ and fits the definition of ZIRLO™ that was used when the "Rule" change was made to 10 CFR 50.44 and 10 CFR 50.46.

Background

As the nuclear industry pursues longer operating cycles with increased fuel discharge burnup and more aggressive fuel management, the corrosion performance requirements for the nuclear fuel cladding become more demanding. Available industry data from the American Nuclear Society, the International Atomic Energy Agency, the Electric Power Research Institute, and Westinghouse indicate that corrosion resistance improves for cladding with a lower tin content. The optimum tin level provides a reduced corrosion rate while maintaining the benefits of mechanical strengthening and resistance to accelerated corrosion from abnormal chemistry conditions. In addition, fuel rod internal pressures (resulting from the increased fuel duty, use of integral fuel burnable absorbers (IFBAs) and corrosion/temperature feedback effects) have become more limiting with respect to fuel rod design criteria. Reducing the associated corrosion buildup and thus minimizing temperature feedback effects, provides additional margin to fuel rod internal pressure design criteria.

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To meet these needs, Westinghouse Electric Company ("Westinghouse") developed a lead test assembly (LTA) program in cooperation with Dominion Nuclear Connecticut, Inc. (DNC). One element of the LTA program is the use of Optimized ("low tin") ZIRLO™ cladding and structural material. "Low tin" ZIRLO™ LTAs implemented at the Byron Station have previously received exemption approval from the NRC with respect to 10 CFR 50.44 and 10 CFR 50.46, and 10 CFR 50 Appendix K (Reference 2). These LTAs have resided in the Byron units for two cycles. As part of the LTA program, DNC and Westinghouse plan to include Optimized ZIRLO™ in eight LTAs to be initially inserted into the cycle 10 of the Millstone Power Station, Unit No. 3. The Millstone LTAs will use an Optimized ZIRLO™ material with an identical nominal tin target content []¹a, c as that used for the Catawba Nuclear Station LTAs (Reference 3) and the Byron Station LTA replacement rods. The original Byron Station LTAs had a nominal tin target content of []²a, c.

Millstone Unit No. 3 Technical Specification, Section 5.3.1, "Fuel Assemblies," specifies that each fuel assembly shall consist of a matrix of ZIRLO™ or Zircaloy fuel rods. Since the LTA ZIRLO™ cladding material will have a tin composition below that currently licensed in WCAP-12610-P-A, an exemption from 10 CFR 50.44, 10 CFR 50.46, and 10 CFR 50, Appendix K is required. It has been determined by Westinghouse [

J^{a, c}. Therefore, Westinghouse will perform a LOCA evaluation of the Millstone Unit No. 3 LTAs using existing LOCA methods with a supplemental transition core assessment prior to implementation to ensure the LTAs are bounded by the current analysis of record. The Technical Specifications specifically allow the use of LTAs, thus no additional technical specification changes are required for the use of these LTAs utilizing Optimized ZIRLOTM material.

Technical Justification of Acceptability

DNC and Westinghouse will jointly perform evaluations of the LTAs during the development program phase. These evaluations will include both testing and analyses, and address the aspects of safety, including mechanical, neutronics, thermal-hydraulic, transient, and LOCA accident analyses and will cover the design feature changes for the LTAs. The evaluations pertinent to the Optimized ZIRLOTM, for which this exemption request is being made, are summarized below:

• Mechanical evaluations of the Millstone Unit No. 3 LTAs with respect to criteria that govern acceptability considering its mechanical design will be performed. The same design methods utilized for the current Robust Fuel Assembly fuel will be used. No new or altered design limits for purposes of 10 CFR 50, Appendix A, General Design Criterion 10, "Reactor Design," need to be applied or are required for this program. A fuel rod design evaluation will be performed for the Millstone Unit No. 3 LTAs. The objective of this evaluation will be to show that all fuel rod design criteria (i.e., specified acceptable fuel design limits as required by GDC 10) would be met. With respect to the mechanical evaluations,

inclusive of material properties, three specific areas would be potentially impacted by the Optimized ZIRLO $^{\text{TM}}$. These areas are material properties, corrosion and thermal creep.

* Material Properties: [

* Corrosion: [

] a, b, c.

* Thermal Creep: [

1^{a, b, c}. This design criterion will be confirmed in the Millstone Unit No. 3 cycle specific reload evaluations.

- DNC and Westinghouse have performed nuclear design evaluations of the impact of the LTAs on the nuclear design. The standard reload methodologies can be used to model the LTAs. The features of the LTAs do not challenge the validity of the standard methodologies. DNC and Westinghouse will use the standard reload methodologies for the Millstone Unit No. 3 reload design containing the LTAs and will ensure the LTAs are not placed in limiting core locations.
- Thermal-hydraulic, LOCA and non-LOCA transient safety analysis evaluations will be performed for the LTAs. These evaluations will confirm that the LTAs will be bounded by the current analyses of record, accounting for transition core penalties, and will be documented in the reload safety evaluation for Millstone Unit No. 3, Cycle 10.

Justification of Exemption and Special Circumstances

10 CFR 50.12, "Specific exemptions," states that the Nuclear Regulatory Commission (NRC) may grant exemptions from the requirements of the regulations of this part provided three conditions are met. The three conditions are: 1) the exemption is authorized by law, 2) the exemption will not present an undue risk to the health and safety of the public, 3) the exemption is consistent with the common defense and security. In addition, the Commission will not consider granting an exemption unless special circumstances are present.

The requested exemption to allow the use of Optimized ZIRLO™ cladding material rather than Zircaloy or ZIRLO™ in the LTAs to be inserted in the Millstone Unit No. 3 core satisfies these criteria as described below.

1. This exemption is authorized by law

As required by 10 CFR 50.12(a)(1), this requested exemption is "authorized by law." The selection of a specific cladding material in 10 CFR 50.44, 10 CFR 50.46, and implied in 10 CFR Part 50, Appendix K, was adopted at the discretion of the Commission consistent with its statutory authority. No statute required the NRC to adopt this specification. Additionally, the NRC has the authority under Section 50.12 to grant exemptions from the requirements of Part 50 upon showing proper justification. Further, it should be noted that, by submitting this exemption request, DNC does not seek an exemption from the acceptance and analytical criteria of 10 CFR 50.44, 10 CFR 50.46, and 10 CFR Part 50, Appendix K. The intent of the request is solely to allow the use of criteria set forth in these regulations for application to the Optimized ZIRLOTM cladding material.

2. This exemption will not present an undue risk to public health and safety

The LTA reload evaluation will ensure that these acceptance criteria are met following the insertion of LTAs containing Optimized ZIRLOTM material. Fuel assemblies using Optimized ZIRLOTM cladding will be evaluated using NRC-approved analytical methods and plant specific models to address the changes in the cladding material properties. The safety analysis for Millstone Unit No. 3 is supported by the applicable technical specifications. The Millstone Unit No. 3 reload cores containing Optimized ZIRLOTM cladding are required to be operated in accordance with the operating limits specified in the technical specifications. As required by the technical specifications, the LTAs utilizing Optimized ZIRLOTM cladding will be placed in non-limiting core locations. Thus, the granting of this exemption request will not pose an undue risk to public health and safety.

3. This exemption is consistent with common defense and security

As noted above, the exemption request is only to allow the application of the aforementioned regulations to an improved cladding material. All of the requirements and acceptance criteria will be maintained. The special nuclear material in these assemblies is required to be handled and controlled in accordance with approved procedures. Use of the LTA in Millstone Unit No. 3 will not affect plant operations and is consistent with the common defense and security.

Special circumstances support the issuance of an exemption

10 CFR 50.12(a)(2) states that the NRC will not consider granting an exemption to the regulations unless special circumstances are present. The requested exemption meets the special circumstances of 10 CFR 50.12(a)(2)(ii) which states that, "Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule." In this particular circumstance, application of the subject regulations is not necessary to achieve the underlying purpose of the rule.

10 CFR 50.46 identifies acceptance criteria for emergency core cooling system (ECCS) performance at nuclear power plants. Due to the similarities in the material properties of the Optimized ZIRLO™ and standard ZIRLO™, the current ECCS analysis approach remains applicable and unchanged. Westinghouse will perform a LOCA evaluation of the Millstone Unit No. 3 LTAs using existing LOCA methods with a supplemental transition core assessment prior to implementation to ensure the LTAs are bounded by the current analysis of record. Therefore, it can be concluded that the ECCS performance of the Millstone Unit No. 3 core will not be adversely affected by the insertion of eight Optimized ZIRLO™ LTAs.

The intent of 10 CFR 50, Appendix K, paragraph I.A.5 is to apply an equation for rates of energy release, hydrogen generation, and cladding oxidation from a metal-water reaction that conservatively bounds all post-LOCA scenarios (i.e., the Baker-Just equation). Application of the Baker-Just equation has been demonstrated to be appropriate for the Optimized ZIRLO™ alloy. Due to the similarities in the composition of the Optimized ZIRLO™ and standard ZIRLO™, the application of the Baker-Just equation will continue to conservatively bound all post-LOCA scenarios.

Conclusion

10 CFR 50.44, and 10 CFR 50.46, and 10 CFR 50, Appendix K only apply to the use of fuel rods clad with Zircaloy or ZIRLO™. 10 CFR 50.44, and 10 CFR 50.46, and 10 CFR 50, Appendix K do not apply to the proposed use of Optimized ZIRLO™ LTAs since the composition of tin in these fuel rods will be below the lower bound of the licensing limit for ZIRLO™ (i.e., 0.80%) as defined in WCAP-12610-P-A. In addition, paragraph I.A.5 of 10 CFR 50 Appendix K, "ECCS Evaluation Models," references an analysis utilizing the Baker-Just equation, which assumes use of a zirconium alloy different than Optimized ZIRLO™.

In order to support optimization of the ZIRLO™ material with regard to improved corrosion resistance, an exemption from the requirements of 10 CFR 50.44, 10 CFR 50.46, and 10 CFR 50, Appendix K is requested. As required by 10 CFR 50.12, the requested exemption is authorized by law, does not present undue risk to public health and safety, and is consistent with common defense and security. Approval of this exemption request does not violate the underlying purpose of the rule. Special circumstances do exist to justify the approval of an exemption from the subject requirements.

References

- 1) Davidson, S. L. and Nuhfer, D. L. (Eds.), "VANTAGE + Fuel Assembly Reference Core Report," WCAP-12610-P-A, April 1995.
- 2) Letter from Mr. J. B. Hickman (NRC) to Mr. O. D. Kingsley, (President, Nuclear Generation Group, Commonwealth Edison Company), "Issuance of Exemption from the Requirements of 10 CFR 50.44, 10 CFR 50.46, and 10 CFR Part 50, Appendix K Byron Station, Units 1 and 2 (TAC Nos. MA3930 and MA3931)," February 26, 1999.
- 3) Letter from Mr. G. R. Peterson (Catawba Nuclear Station) to Document Control Desk (NRC), "Catawba Nuclear Station, Units 1 & 2, Docket Numbers 50-413, 50-414, Request for Exemption Pursuant to 10 CFR 50.12 Exemption to the Cladding Material Specified in 10 CFR 50.44, 10 CFR 50.46 and 10 CFR 50 Appendix K," December 3, 2002.

Docket No. 50-423 B18922

Attachment 3

Millstone Power Station, Unit No. 3

Affidavit to Support Withholding of Westinghouse Proprietary Information form Public <u>Disclosure</u>



Westinghouse Electric Company Nuclear Services P.O. Box 355 Pittsburgh, Pennsylvania 15230-0355 USA

U.S. Nuclear Regulatory Commission

ATTN: Document Control Desk

Washington, DC 20555

Direct tel: 412/374-5942 Direct fax: 412/374-4011

e-mail: fasnacjw@westinghouse.com

Attention:

J. S. Wermiel, Chief

Reactor Systems Branch

Division of Systems Safety and Analysis

Our ref: CAW-03-1663

June 16, 2003

APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

Subject:

Millstone Power Station, Unit No. 3, Request for Exemption Pursuant to 10 CFR 50.12, Exemption to the Cladding Material Specified in 10 CFR 50.44, 10 CFR 50.46, and 10 CFR 50.

Appendix K, Docket No. 50-423, Letter No. B18922

Dear Mr. Wermiel:

The proprietary information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-03-1663 signed by the owner of the proprietary information, Westinghouse Electric Company LLC, a Delaware limited liability company ("Westinghouse"). The affidavit, which accompanies this letter, sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR Section 2.790 of the Commission's regulations.

Accordingly, this letter authorizes the utilization of the accompanying Affidavit by Dominion Nuclear Connecticut, Inc. for Millstone Power Station, Unit No. 3.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-03-1663, and should be addressed to H. A. Sepp, Manager, Regulatory Compliance and Plant Licensing, Westinghouse Electric Company, P. O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

Very truly yours,

/ John W. Fasnacht, Mana | Major Programs Group

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

SS

COUNTY OF ALLEGHENY:

Before me, the undersigned authority, personally appeared John W. Fasnacht, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC, a Delaware limited liability company ("Westinghouse") and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:

John W. Fasnacht, Manager

Major Programs Group

Sworn to and subscribed,

before me this /6 day

of <u>fune</u>, 2003

Notary Public

Notarial Seal
Sharon L. Fiori, Notary Public
Monroeville Boro, Allegheny County
My Commission Expires January 29, 2007

- (1) I am Manager, Major Programs Group, in Nuclear Services, of the Westinghouse Electric Company LLC, a Delaware limited liability company ("Westinghouse") and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing and rulemaking proceedings, and am authorized to apply for its withholding on behalf of the Westinghouse Electric Company.
- (2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.790 of the Commission's regulations and in conjunction with the Westinghouse application for withholding accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures utilized by the Westinghouse Electric Company in designating information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of Section 2.790 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
 - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.
 - (ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

- (a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.
- (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.
- (c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.

- (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.
- (e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.
- (f) It contains patentable ideas, for which patent protection may be desirable.

There are sound policy reasons behind the Westinghouse system which include the following:

- (a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.
- b) It is information which is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.
- Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.
- (d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.
- (e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition of those countries.
- (f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.
- (iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.790, it is to be received in confidence by the Commission.
- (iv) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.

(v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in "Millstone Power Station, Unit No. 3, Request for Exemption Pursuant to 10 CFR 50.12, Exemption to the Cladding Material Specified in 10 CFR 50.44, 10 CFR 50.46, and 10 CFR 50 Appendix K, Docket No. 50-423, Letter No. B18922," for information in support of Millstone Power Station, Unit No. 3 exemption request to the cladding material specified in 10 CFR 50.44, 10 CFR 50.46 and 10 CFR 50 Appendix K to the Commission, transmitted via Dominion Nuclear Connecticut, Inc. for Millstone Power Station, Unit No. 3 letter and Application for Withholding Proprietary Information from Public Disclosure, J. W. Fasnacht, Westinghouse, Manager Major Programs Group to the attention of J. S. Wermiel, Chief, Reactor Systems Branch, Division of Systems Safety and Analysis. The proprietary information provides the technical assessment for the exemption request.

This information is part of that which will enable Westinghouse to:

- (a) Provide technical assessment for the exemption request.
- (b) Assist customers to obtain license changes.

Further this information has substantial commercial value as follows:

(a) Westinghouse can use this information to further enhance their licensing position with their competitors.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar technical evaluation justifications and licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the technology described in part by the information is the result of applying the results of many years of experience in an intensive Westinghouse effort and the expenditure of a considerable sum of money.

In order for competitors of Westinghouse to duplicate this information, similar technical programs would have to be performed and a significant manpower effort, having the requisite talent and experience, would have to be expended for developing the enclosed improved core thermal performance methodology.

Further the deponent sayeth not.

Proprietary Information Notice

Transmitted herewith are proprietary and non-proprietary versions of documents furnished to the NRC. In order to conform to the requirements of 10 CFR 2.790 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, the information which is proprietary in the proprietary versions is contained within brackets, and where the proprietary information has been deleted in the non-proprietary versions, only the brackets remain (the information that was contained within the brackets in the proprietary versions having been deleted). The justification for claiming the information so designated as proprietary is indicated in both versions by means of lower case letters (a) through (f) located as a superscript immediately following the brackets enclosing each item of information being identified as proprietary or in the margin opposite such information. These lower case letters refer to the types of information Westinghouse customarily holds in confidence identified in Sections (4)(ii)(a) through (4)(ii)(f) of the affidavit accompanying this transmittal pursuant to 10 CFR 2.790(b)(1).

Copyright Notice

The documents transmitted herewith each bear a Westinghouse copyright notice. The NRC is permitted to make the number of copies for the information contained in these reports which are necessary for its internal use in connection with generic and plant-specific reviews and approvals as well as the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, order, or regulation subject to the requirements of 10 CFR 2.790 regarding restrictions on public disclosure to the extent such information has been identified as proprietary by Westinghouse, copyright protection not withstanding. With respect to the non-proprietary versions of these reports, the NRC is permitted to make the number of copies beyond these necessary for its internal use which are necessary in order to have one copy available for public viewing in the appropriate docket files in the public document room in Washington, DC and in local public document rooms as may be required by NRC regulations if the number of copies submitted is insufficient for this purpose. Copies made by the NRC must include the copyright notice in all instances and the proprietary notice if the original was identified as proprietary.